



## GD32W515 series of 32-bit ARM<sup>®</sup> Cortex<sup>®</sup>-M33 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |                  |     |            |                  |      |             |      |                 |                |             | Analog Interface      |               | Package |
|----------|--------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|------------------|-----|------------|------------------|------|-------------|------|-----------------|----------------|-------------|-----------------------|---------------|---------|
|          |              |                 | Flash          | SRAM |          | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART        | I <sup>2</sup> C | SPI | USB 2.0 FS | I <sup>2</sup> S | SDIO | IEEE 802.11 | QSPI | Digital filters | Digital Camera | HW Security | 12bit ADC Units (CHs) | Cap.Touch Key |         |
| GD32W515 | GD32W515TQG6 | 180             | 1024K          | 384K | up to 25 | 2            | 3            | 1                   | 1                | 1               | 2   | 1   | 3            | 2                | 2   | OTG        | 1                | 1    | b/g/n       | 1    |                 |                | •           | 1(5)                  | 7             | QFN36   |
|          | GD32W515TIQ6 | 180             | 2048K          | 448K | up to 25 | 2            | 3            | 1                   | 1                | 1               | 2   | 1   | 3            | 2                | 2   | OTG        | 1                | 1    | b/g/n       | 1    |                 |                | •           | 1(5)                  | 7             | QFN36   |
|          | GD32W515P0Q6 | 180             | 0K             | 448K | up to 43 | 2            | 4            | 1                   | 1                | 1               | 2   | 1   | 3            | 2                | 2   | OTG        | 1                | 1    | b/g/n       | 1    | •               | •              | •           | 1(9)                  | 12            | QFN56   |
|          | GD32W515PIQ6 | 180             | 2048K          | 448K | up to 43 | 2            | 4            | 1                   | 1                | 1               | 2   | 1   | 3            | 2                | 2   | OTG        | 1                | 1    | b/g/n       | 1    | •               | •              | •           | 1(9)                  | 12            | QFN56   |



# GD32L233 series of 32-bit ARM<sup>®</sup> Cortex<sup>®</sup>-M23 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |         |                  |     |         |                  |      |             | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|---------|------------------|-----|---------|------------------|------|-------------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |          | LPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USAR +UART   | LP UART | I <sup>2</sup> C | SPI | USB 2.0 | I <sup>2</sup> S | Comp | Segment LCD | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32L233 | GD32L233K8Q6 | 64              | 64K            | 16K  | up to 29 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | QFN32   |
|          | GD32L233KBQ6 | 64              | 128K           | 24K  | up to 29 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | QFN32   |
|          | GD32L233K8T6 | 64              | 64K            | 16K  | up to 27 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | LQFP32  |
|          | GD32L233KBT6 | 64              | 128K           | 24K  | up to 27 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | LQFP32  |
|          | GD32L233C8T6 | 64              | 64K            | 16K  | up to 43 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | LQFP48  |
|          | GD32L233CBT6 | 64              | 128K           | 24K  | up to 43 | 1            | 4            | 0                   | 2                | 1               | 2   | 1   | 2+2          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | LQFP48  |
|          | GD32L233CCT6 | 64              | 256K           | 32K  | up to 43 | 1            | 4            | 0                   | 2                | 1               | 2   | 1   | 2+2          | 1       | 2                | 2   | FS      | 1                | 2    |             | 1(10)                 | 1               | LQFP48  |
|          | GD32L233R8T6 | 64              | 64K            | 16K  | up to 59 | 1            | 3            | 0                   | 2                | 1               | 2   | 1   | 2+1          | 1       | 3                | 2   | FS      | 1                | 2    | 8*28/4*32   | 1(16)                 | 1               | LQFP64  |
|          | GD32L233RBT6 | 64              | 128K           | 24K  | up to 59 | 1            | 4            | 0                   | 2                | 1               | 2   | 1   | 2+2          | 1       | 3                | 2   | FS      | 1                | 2    | 8*28/4*32   | 1(16)                 | 1               | LQFP64  |
|          | GD32L233RCT6 | 64              | 256K           | 32K  | up to 59 | 1            | 4            | 0                   | 2                | 1               | 2   | 1   | 2+2          | 1       | 3                | 2   | FS      | 1                | 2    | 8*28/4*32   | 1(16)                 | 1               | LQFP64  |



# GD32E5 series of 32-bit ARM® Cortex®-M33 MCUs Selection Guide

| Series    | Part No.     | Max Speed (MHz) | Memory (Bytes) |               | I/O       | Timer        |              |                     |                  |                 |     |     | Connectivity |     |     |          |         |     |      |           |     |       |      | EXMC | Analog Interface      |                 | Package |
|-----------|--------------|-----------------|----------------|---------------|-----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|---------|-----|------|-----------|-----|-------|------|------|-----------------------|-----------------|---------|
|           |              |                 | Flash          | SRAM          |           | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 | I²S | SDIO | Ether-net | TMU | HRTIM | COMP |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32E503  | GD32E503CCT6 | 180             | 256K           | 96K           | up to 37  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 3+0          | 3   | 3   | 2        | FS      | 2   |      |           |     | •     |      |      | 3(10)                 | 2               | LQFP48  |
|           | GD32E503CET6 | 180             | 512K           | 128K          | up to 37  | 1            | 9            | 1                   | 2                | 1               | 2   | 1   | 3+0          | 3   | 3   | 2        | FS      | 2   |      |           |     | •     |      |      | 3(10)                 | 2               | LQFP48  |
|           | GD32E503RCT6 | 180             | 256K           | 96K           | up to 51  | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     |      |      | 3(16)                 | 2               | LQFP64  |
|           | GD32E503RET6 | 180             | 512K           | 128K          | up to 51  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     |      |      | 3(16)                 | 2               | LQFP64  |
|           | GD32E503VCT6 | 180             | 256K           | 96K           | up to 80  | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     | •    |      | 3(16)                 | 2               | LQFP100 |
|           | GD32E503VET6 | 180             | 512K           | 128K          | up to 80  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     | •    |      | 3(16)                 | 2               | LQFP100 |
|           | GD32E503ZCT6 | 180             | 256K           | 96K           | up to 112 | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     | •    |      | 3(21)                 | 2               | LQFP144 |
|           | GD32E503ZET6 | 180             | 512K           | 128K          | up to 112 | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | FS      | 2   | 1    |           |     | •     | •    |      | 3(21)                 | 2               | LQFP144 |
| GD32E505  | GD32E505RBT6 | 180             | 128K           | 80K           | up to 51  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E505RCT6 | 180             | 256K           | 96K           | up to 51  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E505RET6 | 180             | 512K           | 128K          | up to 51  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E505VCT6 | 180             | 256K           | 96K           | up to 80  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32E505VET6 | 180             | 512K           | 128K          | up to 80  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32E505ZCT6 | 180             | 256K           | 96K           | up to 112 | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP144 |
|           | GD32E505ZET6 | 180             | 512K           | 128K          | up to 112 | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      |           | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP144 |
| GD32E507  | GD32E507RCT6 | 180             | 256K           | 96K           | up to 51  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E507RET6 | 180             | 512K           | 128K          | up to 51  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E507VCT6 | 180             | 256K           | 96K           | up to 80  | 1            | 3            | 1                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32E507VET6 | 180             | 512K           | 128K          | up to 80  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32E507ZCT6 | 180             | 256K           | 96K           | up to 112 | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP144 |
|           | GD32E507ZET6 | 180             | 512K           | 128K          | up to 112 | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3        | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP144 |
| GD32E508  | GD32E508RET6 | 180             | 512K           | 128K          | up to 51  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3xFD     | HS OTG  | 2   |      | •         | •   | •     | 3    |      | 2(16)                 | 2               | LQFP64  |
|           | GD32E508VET6 | 180             | 512K           | 128K          | up to 80  | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3xFD     | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32E508ZET6 | 180             | 512K           | 128K          | up to 112 | 1            | 9            | 2                   | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 3xFD     | HS OTG  | 2   |      | •         | •   | •     | 3    | •    | 2(16)                 | 2               | LQFP144 |
| GD32E PRT | GD32EPTRTDT6 | 180             | 384K           | 96K+4MB PSRAM | up to 51  | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 3+3          | 3   | 3   |          | FS      | 2   |      | •         |     |       |      |      | 3(16)                 | 2               | LQFP64  |
|           | GD32EPRTVDT6 | 180             | 384K           | 96K+4MB PSRAM | up to 80  | 1            | 3            | 2                   | 2                | 1               | 2   | 1   | 3+3          | 3   | 3   |          | FS      | 2   |      | •         |     |       |      | •    | 3(16)                 | 2               | LQFP100 |



# GD32E23x series of 32-bit ARM® Cortex®-M23 MCUs Selection Guide

| Series   | Part No.       | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |     |     |            |     |      |        | Analog Interface      |                 | Package |
|----------|----------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|------------|-----|------|--------|-----------------------|-----------------|---------|
|          |                |                 | Flash          | SRAM |          | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART        | I²C | SPI | USB 2.0 FS | I²S | Comp | OP-AMP | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32E230 | GD32E230F4P6TR | 72              | 16K            | 4K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(9)                  |                 | TSSOP20 |
|          | GD32E230F6P6TR | 72              | 32K            | 6K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(9)                  |                 | TSSOP20 |
|          | GD32E230F8P6TR | 72              | 64K            | 8K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(9)                  |                 | TSSOP20 |
|          | GD32E230F4V6TR | 72              | 16K            | 4K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(9)                  |                 | LGA20   |
|          | GD32E230F6V6TR | 72              | 32K            | 6K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(9)                  |                 | LGA20   |
|          | GD32E230F8V6TR | 72              | 64K            | 8K   | up to 15 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(9)                  |                 | LGA20   |
|          | GD32E230G4U6TR | 72              | 16K            | 4K   | up to 23 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | QFN28   |
|          | GD32E230G6U6TR | 72              | 32K            | 6K   | up to 23 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | QFN28   |
|          | GD32E230G8U6TR | 72              | 64K            | 8K   | up to 23 |              | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(10)                 |                 | QFN28   |
|          | GD32E230K4U6   | 72              | 16K            | 4K   | up to 27 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | QFN32   |
|          | GD32E230K6U6   | 72              | 32K            | 6K   | up to 27 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | QFN32   |
|          | GD32E230K8U6   | 72              | 64K            | 8K   | up to 27 |              | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(10)                 |                 | QFN32   |
|          | GD32E230K4T6   | 72              | 16K            | 4K   | up to 25 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | LQFP32  |
|          | GD32E230K6T6   | 72              | 32K            | 6K   | up to 25 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | LQFP32  |
|          | GD32E230K8T6   | 72              | 64K            | 8K   | up to 25 |              | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(10)                 |                 | LQFP32  |
|          | GD32E230C4T6   | 72              | 16K            | 4K   | up to 39 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | LQFP48  |
|          | GD32E230C6T6   | 72              | 32K            | 6K   | up to 39 |              | 4            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   | 1    |        | 1(10)                 |                 | LQFP48  |
|          | GD32E230C8T6   | 72              | 64K            | 8K   | up to 39 |              | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   | 1    |        | 1(10)                 |                 | LQFP48  |
| GD32E232 | GD32E232E4U7TR | 72              | 16K            | 4K   | up to 18 | 1            | 4            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 1   |            | 1   |      |        | 1(9)                  | 4               | QFN24   |
|          | GD32E232E6U7TR | 72              | 32K            | 6K   | up to 18 | 1            | 4            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 1   |            | 1   |      |        | 1(9)                  | 4               | QFN24   |
|          | GD32E232E8U7TR | 72              | 64K            | 8K   | up to 18 | 1            | 5            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |      |        | 1(9)                  | 4               | QFN24   |
|          | GD32E232K4Q7TR | 72              | 16K            | 4K   | up to 28 | 1            | 4            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 1   |            | 1   |      |        | 1(16)                 | 4               | QFN32   |
|          | GD32E232K6Q7TR | 72              | 32K            | 6K   | up to 28 | 1            | 4            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 1   |            | 1   |      |        | 1(16)                 | 4               | QFN32   |
|          | GD32E232K8Q7TR | 72              | 64K            | 8K   | up to 28 | 1            | 5            | 1                   | 2                | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |      |        | 1(16)                 | 4               | QFN32   |



## GD32VF103 series of 32-bit RISC-V MCUs Selection Guide

| Series    | Part No.      | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |                     |                  |                 |     |     | Connectivity |                  |     |          |            |                  |      |           | EXMC | Analog Interface      |                 | Package |
|-----------|---------------|-----------------|----------------|------|----------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|------------------|-----|----------|------------|------------------|------|-----------|------|-----------------------|-----------------|---------|
|           |               |                 | Flash          | SRAM |          | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I <sup>2</sup> C | SPI | CAN 2.0B | USB 2.0 FS | I <sup>2</sup> S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32VF103 | GD32VF103T4U6 | 108             | 16K            | 6K   | up to 26 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | QFN36   |
|           | GD32VF103T6U6 | 108             | 32K            | 10K  | up to 26 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | QFN36   |
|           | GD32VF103T8U6 | 108             | 64K            | 20K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | QFN36   |
|           | GD32VF103TBU6 | 108             | 128K           | 32K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | QFN36   |
|           | GD32VF103C4T6 | 108             | 16K            | 6K   | up to 37 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | LQFP48  |
|           | GD32VF103C6T6 | 108             | 32K            | 10K  | up to 37 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(10)                 | 2               | LQFP48  |
|           | GD32VF103C8T6 | 108             | 64K            | 20K  | up to 37 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2                | 3   | 2        | OTG        | 2                |      |           |      | 2(10)                 | 2               | LQFP48  |
|           | GD32VF103CBT6 | 108             | 128K           | 32K  | up to 37 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2                | 3   | 2        | OTG        | 2                |      |           |      | 2(10)                 | 2               | LQFP48  |
|           | GD32VF103R4T6 | 108             | 16K            | 6K   | up to 51 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(16)                 | 2               | LQFP64  |
|           | GD32VF103R6T6 | 108             | 32K            | 10K  | up to 51 | 2            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1                | 1   | 2        | OTG        |                  |      |           |      | 2(16)                 | 2               | LQFP64  |
|           | GD32VF103R8T6 | 108             | 64K            | 20K  | up to 51 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+2          | 2                | 3   | 2        | OTG        | 2                |      |           |      | 2(16)                 | 2               | LQFP64  |
|           | GD32VF103RBT6 | 108             | 128K           | 32K  | up to 51 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+2          | 2                | 3   | 2        | OTG        | 2                |      |           |      | 2(16)                 | 2               | LQFP64  |
|           | GD32VF103V8T6 | 108             | 64K            | 20K  | up to 80 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+2          | 2                | 3   | 2        | OTG        | 2                |      |           | •    | 2(16)                 | 2               | LQFP100 |
|           | GD32VF103VBT6 | 108             | 128K           | 32K  | up to 80 | 4            | 1                   | 2                | 1               | 2   | 1   | 3+2          | 2                | 3   | 2        | OTG        | 2                |      |           | •    | 2(16)                 | 2               | LQFP100 |



# GD32E1/C1 series of 32-bit ARM® Cortex®-M4 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |                     |                  |                 |     |     | Connectivity |     |     |          |            |     |      |           | EXMC | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|----------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|-----------|------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |          | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32E103 | GD32E103T8U6 | 120             | 64K            | 20K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   |          | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32E103TBU6 | 120             | 128K           | 32K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   |          | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32E103C8T6 | 120             | 64K            | 20K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32E103CBT6 | 120             | 128K           | 32K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32E103R8T6 | 120             | 64K            | 20K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32E103RBT6 | 120             | 128K           | 32K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32E103V8T6 | 120             | 64K            | 20K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32E103VBT6 | 120             | 128K           | 32K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
| GD32C103 | GD32C103TBU6 | 120             | 128K           | 32K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   | 2 x FD   | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32C103CBT6 | 120             | 128K           | 32K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32C103RBT6 | 120             | 128K           | 32K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32C103VBT6 | 120             | 128K           | 32K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
| GD32E113 | GD32E113T8U6 | 120             | 64K            | 20K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   |          | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32E113TBU6 | 120             | 128K           | 32K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   |          | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32E113C8T6 | 120             | 64K            | 20K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32E113CBT6 | 120             | 128K           | 32K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32E113R8T6 | 120             | 64K            | 20K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32E113RBT6 | 120             | 128K           | 32K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32E113V8T6 | 120             | 64K            | 20K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32E113VBT6 | 120             | 128K           | 32K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   |          | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
| GD32C113 | GD32C113TBU6 | 120             | 128K           | 32K  | up to 26 | 4            | 1                   | 2                | 1               | 2   | 1   | 2+0          | 1   | 1   | 2 x FD   | OTG        |     |      |           |      | 2(10)                 | 2               | QFN36   |
|          | GD32C113CBT6 | 120             | 128K           | 32K  | up to 37 | 10           | 1                   | 2                | 1               | 2   | 1   | 3+0          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           |      | 2(10)                 | 2               | LQFP48  |
|          | GD32C113RBT6 | 120             | 128K           | 32K  | up to 51 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32C113VBT6 | 120             | 128K           | 32K  | up to 80 | 10           | 2                   | 2                | 1               | 2   | 1   | 3+2          | 2   | 3   | 2 x FD   | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |



# GD32F4 series of 32-bit ARM® Cortex®-M4F MCUs Selection Guide

| Series       | Part No.     | Max Speed (MHz) | Memory (Bytes) |           | I/O       | Timer        |                |              |                  |     |     | Connectivity |     |     |          |         |     |      |              |        |         |     |                       | EXMC/SDRAM | Analog Interface |         | Package |
|--------------|--------------|-----------------|----------------|-----------|-----------|--------------|----------------|--------------|------------------|-----|-----|--------------|-----|-----|----------|---------|-----|------|--------------|--------|---------|-----|-----------------------|------------|------------------|---------|---------|
|              |              |                 | Flash          | SRAM      |           | GPTM (16bit) | Adv TM (16bit) | GPTM (32bit) | Basic TM (16bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB OTG | I²S | SDIO | LCD-SDIO TFT | Camera | ETH MAC | IPA | 12bit ADC Units (CHs) |            | 12bit DAC Units  |         |         |
| GD32F425     | GD32F425RET6 | 200             | 512K           | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F425RGT6 | 200             | 1024K          | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F425RKT6 | 200             | 3072K          | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F425VGT6 | 200             | 1024K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | LQFP100 |
|              | GD32F425VKT6 | 200             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | LQFP100 |
|              | GD32F425VGH6 | 200             | 1024K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | BGA100  |
|              | GD32F425VKH6 | 200             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(16)            | 2       | BGA100  |
|              | GD32F425ZGT6 | 200             | 1024K          | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       |            | 3(24)            | 2       | LQFP144 |
| GD32F425ZKT6 | 200          | 3072K           | 256K           | up to 114 | 8         | 2            | 2              | 2            | 2                | 1   | 4+2 | 3            | 3   | 2   | FS+HS    | 2       | 1   |      | 1            |        |         |     |                       | 3(24)      | 2                | LQFP144 |         |
| GD32F427     | GD32F427RET6 | 200             | 512K           | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F427RGT6 | 200             | 1024K          | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F427RKT6 | 200             | 3072K          | 256K      | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       |            | 3(16)            | 2       | LQFP64  |
|              | GD32F427VET6 | 200             | 512K           | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F427VGT6 | 200             | 1024K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F427VKT6 | 200             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F427VEH6 | 200             | 512K           | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F427VGH6 | 200             | 1024K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F427VKH6 | 200             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F427ZET6 | 200             | 512K           | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F427ZGT6 | 200             | 1024K          | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F427ZKT6 | 200             | 3072K          | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F427IEH6 | 200             | 512K           | 256K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | BGA176  |
|              | GD32F427IGH6 | 200             | 1024K          | 256K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | BGA176  |
|              | GD32F427IKH6 | 200             | 3072K          | 256K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |                       | 1/1        | 3(24)            | 2       | BGA176  |
| GD32F470     | GD32F470VET6 | 240             | 512K           | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F470VGT6 | 240             | 1024K          | 512K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F470VIT6 | 240             | 2048K          | 768K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F470VKT6 | 240             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | LQFP100 |
|              | GD32F470VGH6 | 240             | 1024K          | 512K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F470VIH6 | 240             | 2048K          | 768K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F470VKH6 | 240             | 3072K          | 256K      | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/0        | 3(16)            | 2       | BGA100  |
|              | GD32F470ZET6 | 240             | 512K           | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F470ZGT6 | 240             | 1024K          | 512K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F470ZIT6 | 240             | 2048K          | 768K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F470ZKT6 | 240             | 3072K          | 256K      | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | LQFP144 |
|              | GD32F470IGH6 | 240             | 1024K          | 512K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | BGA176  |
|              | GD32F470IIH6 | 240             | 2048K          | 768K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | BGA176  |
|              | GD32F470IKH6 | 240             | 3072K          | 256K      | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   |                       | 1/1        | 3(24)            | 2       | BGA176  |



## GD32F4 series of 32-bit ARM<sup>®</sup> Cortex<sup>®</sup>-M4F MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                |              |                  |     |     | Connectivity |     |     |          |         |     |      |              |        |         |     |                       | EXMC/SDRAM | Analog Interface |         | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|----------------|--------------|------------------|-----|-----|--------------|-----|-----|----------|---------|-----|------|--------------|--------|---------|-----|-----------------------|------------|------------------|---------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Adv TM (16bit) | GPTM (32bit) | Basic TM (16bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB OTG | I²S | SDIO | LCD-SDIO TFT | Camera | ETH MAC | IPA | 12bit ADC Units (CHs) |            | 12bit DAC Units  |         |         |
| GD32D403 | GD32F403RCT6 | 168             | 256K           | 64K  | up to 51  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 0/0                   | 3(16)      | 2                | LQFP64  |         |
|          | GD32F403RET6 | 168             | 512K           | 96K  | up to 51  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 0/0                   | 3(16)      | 2                | LQFP64  |         |
|          | GD32F403RGT6 | 168             | 1024K          | 128K | up to 51  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 0/0                   | 3(16)      | 2                | LQFP64  |         |
|          | GD32F403RIT6 | 168             | 2048K          | 128K | up to 51  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 0/0                   | 3(16)      | 2                | LQFP64  |         |
|          | GD32F403RKT6 | 168             | 3072K          | 128K | up to 51  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 0/0                   | 3(16)      | 2                | LQFP64  |         |
|          | GD32F403VCT6 | 168             | 256K           | 64K  | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | LQFP100 |         |
|          | GD32F403VET6 | 168             | 512K           | 96K  | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | LQFP100 |         |
|          | GD32F403VGT6 | 168             | 1024K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | LQFP100 |         |
|          | GD32F403VIT6 | 168             | 2048K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | LQFP100 |         |
|          | GD32F403VKT6 | 168             | 3072K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | LQFP100 |         |
|          | GD32F403VCH6 | 168             | 256K           | 64K  | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | BGA100  |         |
|          | GD32F403VEH6 | 168             | 512K           | 96K  | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | BGA100  |         |
|          | GD32F403VGH6 | 168             | 1024K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | BGA100  |         |
|          | GD32F403VIH6 | 168             | 2048K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | BGA100  |         |
|          | GD32F403VKH6 | 168             | 3072K          | 128K | up to 80  | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(16)      | 2                | BGA100  |         |
|          | GD32F403ZCT6 | 168             | 256K           | 64K  | up to 112 | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(21)      | 2                | LQFP144 |         |
|          | GD32F403ZET6 | 168             | 512K           | 96K  | up to 112 | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(21)      | 2                | LQFP144 |         |
|          | GD32F403ZGT6 | 168             | 1024K          | 128K | up to 112 | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(21)      | 2                | LQFP144 |         |
|          | GD32F403ZIT6 | 168             | 2048K          | 128K | up to 112 | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(21)      | 2                | LQFP144 |         |
|          | GD32F403ZKT6 | 168             | 3072K          | 128K | up to 112 | 8            | 2              |              | 2                | 2   | 1   | 3+2          | 2   | 3   | 2        | OTG     | 2   | 1    |              |        |         |     | 1/0                   | 3(21)      | 2                | LQFP144 |         |
| GD32F405 | GD32F405RET6 | 168             | 512K           | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | LQFP64  |         |
|          | GD32F405RGT6 | 168             | 1024K          | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | LQFP64  |         |
|          | GD32F405RKT6 | 168             | 3072K          | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | LQFP64  |         |
|          | GD32F405VGT6 | 168             | 1024K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | LQFP100 |         |
|          | GD32F405VKT6 | 168             | 3072K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | LQFP100 |         |
|          | GD32F405VGH6 | 168             | 1024K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | BGA100  |         |
|          | GD32F405VKH6 | 168             | 3072K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(16)      | 2                | BGA100  |         |
|          | GD32F405ZGT6 | 168             | 1024K          | 192K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(24)      | 2                | LQFP144 |         |
|          | GD32F405ZKT6 | 168             | 3072K          | 192K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      |         |     |                       | 3(24)      | 2                | LQFP144 |         |





## GD32F4 series of 32-bit ARM® Cortex®-M4F MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                |              |                  |     |     | Connectivity |     |     |          |         |     |      |              |        |         |     | EXMC/SDRAM | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|----------------|--------------|------------------|-----|-----|--------------|-----|-----|----------|---------|-----|------|--------------|--------|---------|-----|------------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Adv TM (16bit) | GPTM (32bit) | Basic TM (16bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB OTG | I²S | SDIO | LCD-SDIO TFT | Camera | ETH MAC | IPA |            | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F407 | GD32F407RET6 | 168             | 512K           | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |            | 3(16)                 | 2               | LQFP64  |
|          | GD32F407RGT6 | 168             | 1024K          | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |            | 3(16)                 | 2               | LQFP64  |
|          | GD32F407RKT6 | 168             | 3072K          | 192K | up to 51  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     |            | 3(16)                 | 2               | LQFP64  |
|          | GD32F407VET6 | 168             | 512K           | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F407VGT6 | 168             | 1024K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F407VKT6 | 168             | 3072K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F407VEH6 | 168             | 512K           | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | BGA100  |
|          | GD32F407VGH6 | 168             | 1024K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | BGA100  |
|          | GD32F407VKH6 | 168             | 3072K          | 192K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/0        | 3(16)                 | 2               | BGA100  |
|          | GD32F407ZET6 | 168             | 512K           | 192K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F407ZGT6 | 168             | 1024K          | 192K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F407ZKT6 | 168             | 3072K          | 192K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F407IEH6 | 168             | 512K           | 192K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | BGA176  |
|          | GD32F407IGH6 | 168             | 1024K          | 192K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | BGA176  |
|          | GD32F407IKH6 | 168             | 3072K          | 192K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+2          | 3   | 3   | 2        | FS+HS   | 2   | 1    |              | 1      | 1       |     | 1/1        | 3(24)                 | 2               | BGA176  |
| GD32F450 | GD32F450VET6 | 200             | 512K           | 256K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F450VGT6 | 200             | 1024K          | 256K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F450VIT6 | 200             | 2048K          | 512K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F450VKT6 | 200             | 3072K          | 256K | up to 82  | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 5   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/0        | 3(16)                 | 2               | LQFP100 |
|          | GD32F450ZET6 | 200             | 512K           | 256K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F450ZGT6 | 200             | 1024K          | 256K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F450ZIT6 | 200             | 2048K          | 512K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F450ZKT6 | 200             | 3072K          | 256K | up to 114 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | LQFP144 |
|          | GD32F450IGH6 | 200             | 1024K          | 256K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | BGA176  |
|          | GD32F450IIH6 | 200             | 2048K          | 512K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | BGA176  |
|          | GD32F450IKH6 | 200             | 3072K          | 256K | up to 140 | 8            | 2              | 2            | 2                | 2   | 1   | 4+4          | 3   | 6   | 2        | FS+HS   | 2   | 1    | 1            | 1      | 1       | 1   | 1/1        | 3(24)                 | 2               | BGA176  |



# GD32F30x series of 32-bit ARM® Cortex®-M4 MCUs Selection Guide

| Series       | Part No.     | Max Speed (MHz) | Memory (Bytes) |           | I/O       | Timer        |                      |                  |                 |     |     | Connectivity |     |     |          |            |     |      |            | EXMC | Analog Interface      |                 | Package |         |
|--------------|--------------|-----------------|----------------|-----------|-----------|--------------|----------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|------------|------|-----------------------|-----------------|---------|---------|
|              |              |                 | Flash          | SRAM      |           | GPTM (16bit) | Advanc ed TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | Ether- net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |         |
| GD32F303     | GD32F303CBT6 | 120             | 128K           | 32K       | up to 37  | 4            | 1                    | 2                | 1               | 2   | 1   | 3            | 2   | 3   | 1        | 1          | 2   |      |            |      | 3(10)                 | 2               | LQFP48  |         |
|              | GD32F303CCT6 | 120             | 256K           | 48K       | up to 37  | 4            | 1                    | 2                | 1               | 2   | 1   | 3            | 2   | 3   | 1        | 1          | 2   |      |            |      | 3(10)                 | 2               | LQFP48  |         |
|              | GD32F303CET6 | 120             | 512K           | 64K       | up to 37  | 4            | 1                    | 2                | 1               | 2   | 1   | 3            | 2   | 3   | 1        | 1          | 2   |      |            |      | 3(10)                 | 2               | LQFP48  |         |
|              | GD32F303CGT6 | 120             | 1024K          | 96K       | up to 37  | 10           | 1                    | 2                | 1               | 2   | 1   | 3            | 2   | 3   | 1        | 1          | 2   |      |            |      | 3(10)                 | 2               | LQFP48  |         |
|              | GD32F303RBT6 | 120             | 128K           | 32K       | up to 51  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   |      |            |      | 3(16)                 | 2               | LQFP64  |         |
|              | GD32F303RCT6 | 120             | 256K           | 48K       | up to 51  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      |                       | 3(16)           | 2       | LQFP64  |
|              | GD32F303RET6 | 120             | 512K           | 64K       | up to 51  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      |                       | 3(16)           | 2       | LQFP64  |
|              | GD32F303RGT6 | 120             | 1024K          | 96K       | up to 51  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      |                       | 3(16)           | 2       | LQFP64  |
|              | GD32F303RIT6 | 120             | 2048K          | 96K       | up to 51  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      |                       | 3(16)           | 2       | LQFP64  |
|              | GD32F303RKT6 | 120             | 3072K          | 96K       | up to 51  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      |                       | 3(16)           | 2       | LQFP64  |
|              | GD32F303VBT6 | 120             | 128K           | 32K       | up to 80  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   |      |            | •    | 3(16)                 | 2               | LQFP100 |         |
|              | GD32F303VCT6 | 120             | 256K           | 48K       | up to 80  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(16)           | 2       | LQFP100 |
|              | GD32F303VET6 | 120             | 512K           | 64K       | up to 80  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(16)           | 2       | LQFP100 |
|              | GD32F303VGT6 | 120             | 1024K          | 96K       | up to 80  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(16)           | 2       | LQFP100 |
|              | GD32F303VIT6 | 120             | 2048K          | 96K       | up to 80  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(16)           | 2       | LQFP100 |
|              | GD32F303VKT6 | 120             | 3072K          | 96K       | up to 80  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(16)           | 2       | LQFP100 |
|              | GD32F303ZCT6 | 120             | 256K           | 48K       | up to 112 | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(21)           | 2       | LQFP144 |
|              | GD32F303ZET6 | 120             | 512K           | 64K       | up to 112 | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(21)           | 2       | LQFP144 |
|              | GD32F303ZGT6 | 120             | 1024K          | 96K       | up to 112 | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(21)           | 2       | LQFP144 |
|              | GD32F303ZIT6 | 120             | 2048K          | 96K       | up to 112 | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |            |      | •                     | 3(21)           | 2       | LQFP144 |
| GD32F303ZKT6 | 120          | 3072K           | 96K            | up to 112 | 10        | 2            | 2                    | 1                | 2               | 1   | 5   | 2            | 3   | 1   | 1        | 2          | 1   |      |            | •    | 3(21)                 | 2               | LQFP144 |         |
| GD32F305     | GD32F305RBT6 | 120             | 128K           | 64K       | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            |      | 2(16)                 | 2               | LQFP64  |         |
|              | GD32F305RCT6 | 120             | 256K           | 96K       | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            |      | 2(16)                 | 2               | LQFP64  |         |
|              | GD32F305RET6 | 120             | 512K           | 96K       | up to 51  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            |      | 2(16)                 | 2               | LQFP64  |         |
|              | GD32F305RGT6 | 120             | 1024K          | 96K       | up to 51  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            |      | 2(16)                 | 2               | LQFP64  |         |
|              | GD32F305VCT6 | 120             | 256K           | 96K       | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP100 |         |
|              | GD32F305VET6 | 120             | 512K           | 96K       | up to 80  | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP100 |         |
|              | GD32F305VGT6 | 120             | 1024K          | 96K       | up to 80  | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP100 |         |
|              | GD32F305ZCT6 | 120             | 256K           | 96K       | up to 112 | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP144 |         |
|              | GD32F305ZET6 | 120             | 512K           | 96K       | up to 112 | 4            | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP144 |         |
|              | GD32F305ZGT6 | 120             | 1024K          | 96K       | up to 112 | 10           | 2                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |            | •    | 2(16)                 | 2               | LQFP144 |         |



# GD32F30x series of 32-bit ARM<sup>®</sup> Cortex<sup>®</sup>-M4 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                     |                  |                 |     |     | Connectivity |                  |     |          |            |                  |      |           | EXMC | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|------------------|-----|----------|------------|------------------|------|-----------|------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I <sup>2</sup> C | SPI | CAN 2.0B | USB 2.0 FS | I <sup>2</sup> S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F307 | GD32F307RCT6 | 120             | 256K           | 96K  | up to 51  | 4            | 1                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F307RET6 | 120             | 512K           | 96K  | up to 51  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F307RGT6 | 120             | 1024K          | 96K  | up to 51  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F307VCT6 | 120             | 256K           | 96K  | up to 80  | 4            | 1                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F307VET6 | 120             | 512K           | 96K  | up to 80  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F307VGT6 | 120             | 1024K          | 96K  | up to 80  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F307ZCT6 | 120             | 256K           | 96K  | up to 112 | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F307ZET6 | 120             | 512K           | 96K  | up to 112 | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F307ZGT6 | 120             | 1024K          | 96K  | up to 112 | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2                | 3   | 2        | OTG        | 2                |      | •         | •    | 2(16)                 | 2               | LQFP144 |



# GD32F3x0 series of 32-bit ARM® Cortex®-M4 MCUs Selection Guide

| Series   | Part No.       | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |     |     |            |     |     |      | Analog Interface      |                 | Package |
|----------|----------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|------------|-----|-----|------|-----------------------|-----------------|---------|
|          |                |                 | Flash          | SRAM |          | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART        | I²C | SPI | USB 2.0 FS | I²S | CEC | Comp | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F310 | GD32F310F4P6TR | 72              | 16K            | 4K   | up to 15 |              | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            | 1   |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F310F6P6TR | 72              | 32K            | 6K   | up to 15 |              | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F310F8P6TR | 72              | 64K            | 8K   | up to 15 |              | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F310G8U6TR | 72              | 64K            | 8K   | up to 23 |              | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |     |      | 1(10)                 |                 | QFN28   |
|          | GD32F310K8U6   | 72              | 64K            | 8K   | up to 27 |              | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |     |      | 1(10)                 |                 | QFN32   |
|          | GD32F310K6T6   | 72              | 32K            | 6K   | up to 25 |              | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            | 1   |     |      | 1(10)                 |                 | LQFP32  |
|          | GD32F310K8T6   | 72              | 64K            | 8K   | up to 25 |              | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |     |      | 1(10)                 |                 | LQFP32  |
|          | GD32F310C8T6   | 72              | 64K            | 8K   | up to 39 |              | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            | 1   |     |      | 1(10)                 |                 | LQFP48  |
| GD32F330 | GD32F330F4P6TR | 84              | 16K            | 4K   | up to 15 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F330F6P6TR | 84              | 32K            | 4K   | up to 15 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F330F8P6TR | 84              | 64K            | 8K   | up to 15 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(9)                  |                 | TSSOP20 |
|          | GD32F330G4U6TR | 84              | 16K            | 4K   | up to 23 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     |      | 1(10)                 |                 | QFN28   |
|          | GD32F330G6U6TR | 84              | 32K            | 4K   | up to 23 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     |      | 1(10)                 |                 | QFN28   |
|          | GD32F330G8U6TR | 84              | 64K            | 8K   | up to 23 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(10)                 |                 | QFN28   |
|          | GD32F330K4U6   | 84              | 16K            | 4K   | up to 27 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     |      | 1(10)                 |                 | QFN32   |
|          | GD32F330K6U6   | 84              | 32K            | 4K   | up to 27 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     |      | 1(10)                 |                 | QFN32   |
|          | GD32F330K8U6   | 84              | 64K            | 8K   | up to 27 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(10)                 |                 | QFN32   |
|          | GD32F330K4T6   | 84              | 16K            | 4K   | up to 25 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     |      | 1(10)                 |                 | LQFP32  |
|          | GD32F330K6T6   | 84              | 32K            | 4K   | up to 25 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     |      | 1(10)                 |                 | LQFP32  |
|          | GD32F330K8T6   | 84              | 64K            | 8K   | up to 25 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(10)                 |                 | LQFP32  |
|          | GD32F330C4T6   | 84              | 16K            | 4K   | up to 39 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     |      | 1(10)                 |                 | LQFP48  |
|          | GD32F330C6T6   | 84              | 32K            | 4K   | up to 39 | 1            | 4            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     |      | 1(10)                 |                 | LQFP48  |
|          | GD32F330C8T6   | 84              | 64K            | 8K   | up to 39 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(10)                 |                 | LQFP48  |
|          | GD32F330CBT6   | 84              | 128K           | 16K  | up to 39 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(10)                 |                 | LQFP48  |
|          | GD32F330R8T6   | 84              | 64K            | 16K  | up to 55 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(16)                 |                 | LQFP64  |
|          | GD32F330RBT6   | 84              | 128K           | 16K  | up to 55 | 1            | 5            | 1                   |                  | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     |      | 1(16)                 |                 | LQFP64  |



# GD32F3x0 series of 32-bit ARM® Cortex®-M4 MCUs Selection Guide

| Series   | Part No.       | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |     |     |            |     |     |      | Analog Interface      |                 | Package |
|----------|----------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|------------|-----|-----|------|-----------------------|-----------------|---------|
|          |                |                 | Flash          | SRAM |          | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART        | I²C | SPI | USB 2.0 FS | I²S | CEC | Comp | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F350 | GD32F350G4U6TR | 108             | 16K            | 4K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN28   |
|          | GD32F350G6U6TR | 108             | 32K            | 6K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN28   |
|          | GD32F350G8U6TR | 108             | 64K            | 8K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN28   |
|          | GD32F350K4U6   | 108             | 16K            | 4K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN32   |
|          | GD32F350K6U6   | 108             | 32K            | 6K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN32   |
|          | GD32F350K8U6   | 108             | 64K            | 8K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | QFN32   |
|          | GD32F350C4T6   | 108             | 16K            | 4K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | LQFP48  |
|          | GD32F350C6T6   | 108             | 32K            | 6K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | LQFP48  |
|          | GD32F350C8T6   | 108             | 64K            | 8K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | LQFP48  |
|          | GD32F350CBT6   | 108             | 128K           | 16K  | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(10)                 | 1               | LQFP48  |
|          | GD32F350R4T6   | 108             | 16K            | 4K   | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(16)                 | 1               | LQFP64  |
|          | GD32F350R6T6   | 108             | 32K            | 8K   | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | OTG        | 1   | 1   | 2    | 1(16)                 | 1               | LQFP64  |
|          | GD32F350R8T6   | 108             | 64K            | 16K  | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(16)                 | 1               | LQFP64  |
|          | GD32F350RBT6   | 108             | 128K           | 16K  | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | OTG        | 1   | 1   | 2    | 1(16)                 | 1               | LQFP64  |



## GD32F2 series of 32-bit ARM® Cortex®-M3 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                |                  |                 |     |     | Connectivity |     |     |          |            |     |      |         |        |         |              | EXMC/ SDRAM | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|----------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|---------|--------|---------|--------------|-------------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Adv TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | LCD-TFT | Camera | ETH MAC | Crypto/ Hash |             | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F205 | GD32F205RCT6 | 120             | 256K           | 128K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         |        |         |              |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F205RET6 | 120             | 512K           | 128K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         |        |         |              |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F205RGT6 | 120             | 1024K          | 256K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         |        |         |              |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F205RKT6 | 120             | 3072K          | 256K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         |        |         |              |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F205VCT6 | 120             | 256K           | 128K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F205VET6 | 120             | 512K           | 128K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F205VGT6 | 120             | 1024K          | 256K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F205VKT6 | 120             | 3072K          | 256K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F205ZCT6 | 120             | 256K           | 128K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F205ZET6 | 120             | 512K           | 128K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F205ZGT6 | 120             | 1024K          | 256K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       |        |         |              | 1/1         | 3(24)                 | 2               | LQFP144 |
| GD32F207 | GD32F207RCT6 | 120             | 256K           | 128K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         | 1      | 1       | 1            |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F207RET6 | 120             | 512K           | 128K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         | 1      | 1       | 1            |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F207RGT6 | 120             | 1024K          | 256K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         | 1      | 1       | 1            |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F207RKT6 | 120             | 3072K          | 256K | up to 51  | 10           | 2              | 2                | 1               | 2   | 1   | 4+2          | 3   | 3   | 2        | OTG        | 2   | 1    |         | 1      | 1       | 1            |             | 3(16)                 | 2               | LQFP64  |
|          | GD32F207VCT6 | 120             | 256K           | 128K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F207VET6 | 120             | 512K           | 128K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F207VGT6 | 120             | 1024K          | 256K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F207VKT6 | 120             | 3072K          | 256K | up to 82  | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/0         | 3(16)                 | 2               | LQFP100 |
|          | GD32F207ZCT6 | 120             | 256K           | 128K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F207ZET6 | 120             | 512K           | 128K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F207ZGT6 | 120             | 1024K          | 256K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F207ZKT6 | 120             | 3072K          | 256K | up to 114 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP144 |
|          | GD32F207IET6 | 120             | 512K           | 128K | up to 140 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP176 |
|          | GD32F207IGT6 | 120             | 1024K          | 256K | up to 140 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP176 |
|          | GD32F207IKT6 | 120             | 3072K          | 256K | up to 140 | 10           | 2              | 2                | 1               | 2   | 1   | 4+4          | 3   | 3   | 2        | OTG        | 2   | 1    | 1       | 1      | 1       | 1            | 1/1         | 3(24)                 | 2               | LQFP176 |



# GD32F10x series of 32-bit ARM® Cortex®-M3 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                     |                  |                 |     |     | Connectivity |     |     |          |            |     |      |           | EXMC | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|-----------|------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F101 | GD32F101T4U6 | 56              | 16K            | 4K   | up to 26  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | QFN36   |
|          | GD32F101T6U6 | 56              | 32K            | 6K   | up to 26  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | QFN36   |
|          | GD32F101T8U6 | 56              | 64K            | 10K  | up to 26  | 3            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | QFN36   |
|          | GD32F101TBU6 | 56              | 128K           | 16K  | up to 26  | 3            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | QFN36   |
|          | GD32F101C4T6 | 56              | 16K            | 4K   | up to 37  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | LQFP48  |
|          | GD32F101C6T6 | 56              | 32K            | 6K   | up to 37  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(10)                 |                 | LQFP48  |
|          | GD32F101C8T6 | 56              | 64K            | 10K  | up to 37  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           |      | 1(10)                 |                 | LQFP48  |
|          | GD32F101CBT6 | 56              | 128K           | 16K  | up to 37  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           |      | 1(10)                 |                 | LQFP48  |
|          | GD32F101R4T6 | 56              | 16K            | 4K   | up to 51  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(16)                 |                 | LQFP64  |
|          | GD32F101R6T6 | 56              | 32K            | 6K   | up to 51  | 2            |                     |                  | 1               | 2   | 1   | 2            | 1   | 1   |          |            |     |      |           |      | 1(16)                 |                 | LQFP64  |
|          | GD32F101R8T6 | 56              | 64K            | 10K  | up to 51  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           |      | 1(16)                 |                 | LQFP64  |
|          | GD32F101RBT6 | 56              | 128K           | 16K  | up to 51  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           |      | 1(16)                 |                 | LQFP64  |
|          | GD32F101RCT6 | 56              | 256K           | 32K  | up to 51  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 1(16)                 | 2               | LQFP64  |
|          | GD32F101RDT6 | 56              | 384K           | 48K  | up to 51  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 1(16)                 | 2               | LQFP64  |
|          | GD32F101RET6 | 56              | 512K           | 48K  | up to 51  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 1(16)                 | 2               | LQFP64  |
|          | GD32F101RFT6 | 56              | 768K           | 80K  | up to 51  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F101RGT6 | 56              | 1024K          | 80K  | up to 51  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F101RIT6 | 56              | 2048K          | 80K  | up to 51  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F101RKT6 | 56              | 3072K          | 80K  | up to 51  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F101V8T6 | 56              | 64K            | 10K  | up to 80  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           | •    | 1(16)                 |                 | LQFP100 |
|          | GD32F101VBT6 | 56              | 128K           | 16K  | up to 80  | 3            |                     |                  | 1               | 2   | 1   | 3            | 2   | 2   |          |            |     |      |           | •    | 1(16)                 |                 | LQFP100 |
|          | GD32F101VCT6 | 56              | 256K           | 32K  | up to 80  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP100 |
|          | GD32F101VDT6 | 56              | 384K           | 48K  | up to 80  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP100 |
|          | GD32F101VET6 | 56              | 512K           | 48K  | up to 80  | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP100 |
|          | GD32F101VFT6 | 56              | 768K           | 80K  | up to 80  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F101VGT6 | 56              | 1024K          | 80K  | up to 80  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F101VIT6 | 56              | 2048K          | 80K  | up to 80  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F101VKT6 | 56              | 3072K          | 80K  | up to 80  | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F101ZCT6 | 56              | 256K           | 32K  | up to 112 | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP144 |
|          | GD32F101ZDT6 | 56              | 384K           | 48K  | up to 112 | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP144 |
|          | GD32F101ZET6 | 56              | 512K           | 48K  | up to 112 | 4            |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 1(16)                 | 2               | LQFP144 |
|          | GD32F101ZFT6 | 56              | 768K           | 80K  | up to 112 | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F101ZGT6 | 56              | 1024K          | 80K  | up to 112 | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F101ZIT6 | 56              | 2048K          | 80K  | up to 112 | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F101ZKT6 | 56              | 3072K          | 80K  | up to 112 | 10           |                     | 2                | 1               | 2   | 1   | 5            | 2   | 3   |          |            |     |      |           | •    | 2(16)                 | 2               | LQFP144 |



# GD32F10x series of 32-bit ARM® Cortex®-M3 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                     |                  |                 |     |     | Connectivity |     |     |          |            |     |      |           | EXMC | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|-----------|------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F103 | GD32F103T4U6 | 108             | 16K            | 6K   | up to 26  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | QFN36   |
|          | GD32F103T6U6 | 108             | 32K            | 10K  | up to 26  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | QFN36   |
|          | GD32F103T8U6 | 108             | 64K            | 20K  | up to 26  | 3            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | QFN36   |
|          | GD32F103TBU6 | 108             | 128K           | 20K  | up to 26  | 3            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | QFN36   |
|          | GD32F103C4T6 | 108             | 16K            | 6K   | up to 37  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | LQFP48  |
|          | GD32F103C6T6 | 108             | 32K            | 10K  | up to 37  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(10)                 |                 | LQFP48  |
|          | GD32F103C8T6 | 108             | 64K            | 20K  | up to 37  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           |      | 2(10)                 |                 | LQFP48  |
|          | GD32F103CBT6 | 108             | 128K           | 20K  | up to 37  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           |      | 2(10)                 |                 | LQFP48  |
|          | GD32F103R4T6 | 108             | 16K            | 6K   | up to 51  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(16)                 |                 | LQFP64  |
|          | GD32F103R6T6 | 108             | 32K            | 10K  | up to 51  | 2            | 1                   |                  | 1               | 2   | 1   | 2            | 1   | 1   | 1        | 1          |     |      |           |      | 2(16)                 |                 | LQFP64  |
|          | GD32F103R8T6 | 108             | 64K            | 20K  | up to 51  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           |      | 2(16)                 |                 | LQFP64  |
|          | GD32F103RBT6 | 108             | 128K           | 20K  | up to 51  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           |      | 2(16)                 |                 | LQFP64  |
|          | GD32F103RCT6 | 108             | 256K           | 48K  | up to 51  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RDT6 | 108             | 384K           | 64K  | up to 51  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RET6 | 108             | 512K           | 64K  | up to 51  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RFT6 | 108             | 768K           | 96K  | up to 51  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RGT6 | 108             | 1024K          | 96K  | up to 51  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RIT6 | 108             | 2048K          | 96K  | up to 51  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103RKT6 | 108             | 3072K          | 96K  | up to 51  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           |      | 3(16)                 | 2               | LQFP64  |
|          | GD32F103V8T6 | 108             | 64K            | 20K  | up to 80  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           | •    | 2(16)                 |                 | LQFP100 |
|          | GD32F103VBT6 | 108             | 128K           | 20K  | up to 80  | 3            | 1                   |                  | 1               | 2   | 1   | 3            | 2   | 2   | 1        | 1          |     |      |           | •    | 2(16)                 |                 | LQFP100 |
|          | GD32F103VCT6 | 108             | 256K           | 48K  | up to 80  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VDT6 | 108             | 384K           | 64K  | up to 80  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VET6 | 108             | 512K           | 64K  | up to 80  | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VFT6 | 108             | 768K           | 96K  | up to 80  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VGT6 | 108             | 1024K          | 96K  | up to 80  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VIT6 | 108             | 2048K          | 96K  | up to 80  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103VKT6 | 108             | 3072K          | 96K  | up to 80  | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(16)                 | 2               | LQFP100 |
|          | GD32F103ZCT6 | 108             | 256K           | 48K  | up to 112 | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZDT6 | 108             | 384K           | 64K  | up to 112 | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZET6 | 108             | 512K           | 64K  | up to 112 | 4            | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZFT6 | 108             | 768K           | 96K  | up to 112 | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZGT6 | 108             | 1024K          | 96K  | up to 112 | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZIT6 | 108             | 2048K          | 96K  | up to 112 | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |
|          | GD32F103ZKT6 | 108             | 3072K          | 96K  | up to 112 | 10           | 2                   | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 1        | 1          | 2   | 1    |           | •    | 3(21)                 | 2               | LQFP144 |





# GD32F10x series of 32-bit ARM® Cortex®-M3 MCUs Selection Guide

| Series   | Part No.     | Max Speed (MHz) | Memory (Bytes) |      | I/O       | Timer        |                      |                  |                 |     |     | Connectivity |     |     |          |            |     |      |           | EXMC | Analog Interface      |                 | Package |
|----------|--------------|-----------------|----------------|------|-----------|--------------|----------------------|------------------|-----------------|-----|-----|--------------|-----|-----|----------|------------|-----|------|-----------|------|-----------------------|-----------------|---------|
|          |              |                 | Flash          | SRAM |           | GPTM (16bit) | Advanc ed TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART +UART  | I²C | SPI | CAN 2.0B | USB 2.0 FS | I²S | SDIO | Ether-net |      | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F105 | GD32F105R8T6 | 108             | 64K            | 64K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RBT6 | 108             | 128K           | 64K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RCT6 | 108             | 256K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RDT6 | 108             | 384K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RET6 | 108             | 512K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RFT6 | 108             | 768K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105RGT6 | 108             | 1024K          | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F105V8T6 | 108             | 64K            | 64K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VBT6 | 108             | 128K           | 64K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VCT6 | 108             | 256K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VDT6 | 108             | 384K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VET6 | 108             | 512K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VFT6 | 108             | 768K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105VGT6 | 108             | 1024K          | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F105ZCT6 | 108             | 256K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F105ZDT6 | 108             | 384K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F105ZET6 | 108             | 512K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F105ZFT6 | 108             | 768K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F105ZGT6 | 108             | 1024K          | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      |           | •    | 2(16)                 | 2               | LQFP144 |
| GD32F107 | GD32F107RBT6 | 108             | 128K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 1   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107RCT6 | 108             | 256K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 1   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107RDT6 | 108             | 384K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107RET6 | 108             | 512K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107RFT6 | 108             | 768K           | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107RGT6 | 108             | 1024K          | 96K  | up to 51  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         |      | 2(16)                 | 2               | LQFP64  |
|          | GD32F107VBT6 | 108             | 128K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 1   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107VCT6 | 108             | 256K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 1   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107VDT6 | 108             | 384K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107VET6 | 108             | 512K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107VFT6 | 108             | 768K           | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107VGT6 | 108             | 1024K          | 96K  | up to 80  | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP100 |
|          | GD32F107ZCT6 | 108             | 256K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F107ZDT6 | 108             | 384K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F107ZET6 | 108             | 512K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F107ZFT6 | 108             | 768K           | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP144 |
|          | GD32F107ZGT6 | 108             | 1024K          | 96K  | up to 112 | 4            | 1                    | 2                | 1               | 2   | 1   | 5            | 2   | 3   | 2        | OTG        | 2   |      | •         | •    | 2(16)                 | 2               | LQFP144 |



# GD32F1x0 series of 32-bit ARM® Cortex®-M3 MCUs Selection Guide

| Series   | Part No.       | Max Speed (MHz) | Memory (Bytes) |      | I/O      | Timer        |              |                     |                  |                 |     |     | Connectivity |     |     |            |     |     | Analog Interface      |                 | Package |
|----------|----------------|-----------------|----------------|------|----------|--------------|--------------|---------------------|------------------|-----------------|-----|-----|--------------|-----|-----|------------|-----|-----|-----------------------|-----------------|---------|
|          |                |                 | Flash          | SRAM |          | GPTM (32bit) | GPTM (16bit) | Advanced TM (16bit) | Basic TM (16bit) | SysTick (24bit) | WDG | RTC | USART        | I²C | SPI | USB 2.0 FS | I²S | CEC | 12bit ADC Units (CHs) | 12bit DAC Units |         |
| GD32F130 | GD32F130F4P6TR | 48              | 16K            | 4K   | up to 15 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     | 1(9)                  |                 | TSSOP20 |
|          | GD32F130F6P6TR | 48              | 32K            | 4K   | up to 15 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     | 1(9)                  |                 | TSSOP20 |
|          | GD32F130F8P6TR | 48              | 64K            | 8K   | up to 15 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(9)                  |                 | TSSOP20 |
|          | GD32F130G4U6TR | 48              | 16K            | 4K   | up to 23 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     | 1(10)                 |                 | QFN28   |
|          | GD32F130G6U6TR | 48              | 32K            | 4K   | up to 23 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     | 1(10)                 |                 | QFN28   |
|          | GD32F130G8U6TR | 48              | 64K            | 8K   | up to 23 | 1            | 5            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(10)                 |                 | QFN28   |
|          | GD32F130K4T6   | 48              | 16K            | 4K   | up to 27 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     | 1(10)                 |                 | LQFP32  |
|          | GD32F130K6T6   | 48              | 32K            | 4K   | up to 27 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     | 1(10)                 |                 | LQFP32  |
|          | GD32F130K8T6   | 48              | 64K            | 8K   | up to 27 | 1            | 5            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(10)                 |                 | LQFP32  |
|          | GD32F130K4U6   | 48              | 16K            | 4K   | up to 27 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     | 1(10)                 |                 | QFN32   |
|          | GD32F130K6U6   | 48              | 32K            | 4K   | up to 27 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     | 1(10)                 |                 | QFN32   |
|          | GD32F130K8U6   | 48              | 64K            | 8K   | up to 27 | 1            | 5            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(10)                 |                 | QFN32   |
|          | GD32F130C4T6   | 48              | 16K            | 4K   | up to 39 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 1            | 1   | 1   |            |     |     | 1(10)                 |                 | LQFP48  |
|          | GD32F130C6T6   | 48              | 32K            | 4K   | up to 39 | 1            | 4            |                     | 1                | 1               | 2   | 1   | 2            | 1   | 1   |            |     |     | 1(10)                 |                 | LQFP48  |
|          | GD32F130C8T6   | 48              | 64K            | 8K   | up to 39 | 1            | 5            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(10)                 |                 | LQFP48  |
| GD32F150 | GD32F130R8T6   | 48              | 64K            | 8K   | up to 55 | 1            | 5            |                     | 1                | 1               | 2   | 1   | 2            | 2   | 2   |            |     |     | 1(16)                 |                 | LQFP64  |
|          | GD32F150G4U6TR | 72              | 16K            | 4K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | QFN28   |
|          | GD32F150G6U6TR | 72              | 32K            | 6K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | QFN28   |
|          | GD32F150G8U6TR | 72              | 64K            | 8K   | up to 24 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | 1          | 1   | 1   | 1(10)                 | 1               | QFN28   |
|          | GD32F150K4U6   | 72              | 16K            | 4K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | QFN32   |
|          | GD32F150K6U6   | 72              | 32K            | 6K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | QFN32   |
|          | GD32F150K8U6   | 72              | 64K            | 8K   | up to 27 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | 1          | 1   | 1   | 1(10)                 | 1               | QFN32   |
|          | GD32F150C4T6   | 72              | 16K            | 4K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | LQFP48  |
|          | GD32F150C6T6   | 72              | 32K            | 6K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | 1          | 1   | 1   | 1(10)                 | 1               | LQFP48  |
|          | GD32F150C8T6   | 72              | 64K            | 8K   | up to 39 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | 1          | 1   | 1   | 1(10)                 | 1               | LQFP48  |
|          | GD32F150R4T6   | 72              | 16K            | 4K   | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 1            | 1   | 1   | 1          | 1   | 1   | 1(16)                 | 1               | LQFP64  |
|          | GD32F150R6T6   | 72              | 32K            | 6K   | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 1   | 1   | 1          | 1   | 1   | 1(16)                 | 1               | LQFP64  |
|          | GD32F150R8T6   | 72              | 64K            | 8K   | up to 55 | 1            | 5            | 1                   | 1                | 1               | 2   | 1   | 2            | 2   | 2   | 1          | 1   | 1   | 1(16)                 | 1               | LQFP64  |